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## Incentives Behind Corporate Formations of Master Limited Partnerships

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## Incentives Behind Corporate Formations of Master Limited Partnerships

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**Incentives Behind Corporate  
Formations of Master Limited Partnerships**

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## **Abstract**

This paper investigates the extent to which taxes, free cash flows and the level of debt were likely to have influenced MLP formations. We limit the analysis to two types of MLP formation: (1) complete or partial liquidation of corporate assets (conversions), and (2) retention of the corporate form as general partner with assets and liabilities allocated to the MLP (roll-outs). In addition to the analysis of MLP formations, we investigate the extent to which the taxes, free cash flows and debt levels are more closely associated with either of these types of MLP formation. The results suggest that prior to 1986 MLP formations were likely to be associated with the tax burden and the level of free cash flows prior to MLP formation. During 1986 it appears that only the tax benefits were influencing the formation of MLPs. In 1987, when Congress established corporate taxation for MLPs, the results are inconclusive and suggest that the model is misspecified with regard to incentives operating behind 1987 MLP formations. In addition, we find that MLP roll-outs are more closely associated with the firm's free cash flows. We also find that MLP conversions appear to be associated with the level of debt and tax burden prior to MLP formation. In both sets of analyses we find that the model is not a good predictor of MLP formation nor MLP type.



# **Incentives Behind Corporate Formations of Master Limited Partnerships**

## **Introduction**

In 1981, the Master Limited Partnership (MLP) organizational form emerged as an alternative to the regular "C" corporation. Even though MLPs possessed attributes of their corporate counterparts, such as limited legal liability, free transferability of partnership units and unlimited life, they were considered partnerships for income tax purposes. This allowed MLP earnings to avoid corporate "double taxation" and led some supporters to claim that MLPs were superior to corporations because of the potential for increased cash flows to investors.<sup>1</sup>

In 1985, more than 30 MLPs were in existence, most in the oil and gas industry. The number of MLPs increased substantially during 1986 and the first half of 1987, and by 1988 more than 119 MLPs were operating in a variety of industries [Stanger Register, 1988, pp. 103-104]. While some MLPs represented new business concerns, many were formed when existing corporations converted to MLP status by transferring some or substantially all of their operating assets to the MLP.

During this time, tax savings was suggested as the primary motivation for MLP formation (the tax motive ). The Tax Reform Act of 1986 (TRA 86) contributed to the increase in MLPs by decreasing the attractiveness of doing business as a corporation relative to doing business as a flow-through entity, such as an S-corporation or partnership.<sup>2</sup> Scholes and Wolfson [1990, p. 154] stated that "the corporate form of organization has become significantly less attractive from a tax standpoint relative to partnerships than it was under prior law." ServiceMaster Inc. provided the following rationale for conversion to MLP status:

"The primary purpose of the proposed reorganization is to enable ServiceMaster to operate after 1986 without the imposition of a

corporate income tax and thereby, among other things, increase the amount of cash available for distribution or reinvestment to those who invest in ServiceMaster or for use in developing the ServiceMaster business."

Although it is likely that tax incentives played a role, it is not clear they were always the dominant reason firms decided to establish or convert to an MLP. Two important non-tax motives exist that would also encourage expansion of MLPs during the 1980's: (1) Owners may have wanted to limit management discretion over the reinvestment of internally generated cash flow (the control motive) and/or (2) they may have wanted to replace debt with equity financing (the financing motive).

This study investigates the extent to which the tax, control, and financing motives were likely to have influenced MLP formations. The analysis was limited to two types of MLP formation: (1) Conversions--complete or partial liquidation of corporate assets, and (2) Roll-outs--retention of the corporate form as general partner with assets and liabilities allocated to the MLP. In addition the study investigates the extent to which one of these three motives is more closely associated than the others with either type of MLP formation.

The data suggest that, prior to 1986, firms with substantial cash flows and high tax burdens were more likely to form an MLP than firms with limited cash flows. In contrast, during 1986 MLP formations were associated with firms that had high tax burdens. The pre-1986 results are particularly important from a tax policy perspective because of Congress' reaction to the apparent tax advantage associated with MLPs. Congress cited the potential "disincorporation of America" as likely if MLPs were allowed to dominate the corporate form of doing business for tax purposes.<sup>3</sup>

In an effort to preserve the corporate tax base and avoid future administrative complexities associated with these large pass-through entities,

Congress imposed corporate tax treatment for most publicly traded partnerships, for taxable years beginning after 1987. This ended the tax advantage associated with MLP formation. Because at least one non-tax motive appears to be important before 1986, changes in tax policy that remove perceived tax advantages should not penalize those MLPs that exist due to non-tax motives. Congress should consider carefully the cost of reducing the distinction between corporations and MLPs in determining future tax policy.

The remainder of this paper is organized as follows. Section one provides a review of MLPs and a summary of previous research. Section two reviews tax and non-tax motives for establishing MLPs. Section three describes the methodology used, sample selection, and tests of hypotheses. Section four discusses the results on the association between the three motives and MLP formation and the additional analysis concerning the type of MLP formation chosen. Section five provides a summary and conclusion.

## **Master Limited Partnerships**

### *MLP Formation*

The first MLP was started by Apache Corporation in 1981.<sup>4</sup> By 1988 more than 119 MLPs were operating in oil and gas, real estate, agriculture, timber management, equipment leasing, cable television systems, hotel/motels, sports franchises and other activities.<sup>5</sup> The four basic methods for creating MLPs are briefly summarized as follows [Willis et. al., 1989, p.35-3]:

Conversions: MLPs can be created by a corporate contribution of all, or substantially all, of its assets to the MLP in exchange for most of the MLP interests followed by a complete liquidation of the corporation and distribution of the partnership interests to the shareholders.

Roll-outs: MLPs can be created by another entity, usually a corporation, that transfers some of its assets to the partnership in exchange for the general and some or all of the limited

partnership units. The corporation may distribute these units to its shareholders as a dividend or sell the units as part of a secondary offering. In addition, the MLP may sell additional units to the public at the time of the roll-out in a primary offering. MLPs can also be created through taxable transactions. The MLP first completes a public offering of its partnership units. The cash received from the offering is then used to purchase the business segment of the corporation. This results in a taxable transaction with the MLP recording its new assets (and related liabilities, if any) at the cost of purchase.

Roll-ups: MLPs can be created by combining a number of existing partnerships into a single MLP. The tax results of the roll-up are basically the same as those in the formation of any other limited partnership.

Contributions: MLPs can be created from scratch by the sponsor creating the partnership. The partnership sells the units on the open market for cash and then uses the proceeds to purchase operating assets.

Of the 119 MLPs in existence in 1988, 26% were created by conversions, 23% by roll-outs, 21% by roll-ups and 30% by contributions (see footnote 5). Only the MLPs created by conversions, roll-outs, and roll-ups have publicly available data concerning the entity prior to its MLP existence. Of these firms, only those MLPs formed by conversion or roll-out switched all or part of their business operations from the corporate to the partnership organizational form. Because we are concerned with changes from the corporate to MLP form the study is limited to examining the factors that are likely to have influenced the firm's decision to form an MLP through conversion or roll-out.

### *MLP Taxation*

Like other limited partnerships, MLPs are subject to the Subchapter K rules under of the Internal Revenue Code. The major characteristics that distinguish MLPs from other limited partnerships are: (1) MLP partnership interests are registered with the SEC, (2) MLPs are generally larger in size,



and (3) MLP limited partners can purchase and sell units in an established market.

Prior to 1987, MLPs had two of the six characteristics that force corporate tax treatment of an entity.<sup>6</sup> However, because Congress became concerned about the number of firms seeking MLP status, it amended Section 7704 of the Revenue Act of 1987, which required that certain publicly held partnerships be treated as corporations for tax purposes. It also established a single conclusive test of –public trading– as the factor that determines corporate treatment. Consequently, because of public trading, MLPs were generally subject to corporate tax treatment. An exception allowed MLPs, in existence as of December 17, 1987, to be taxed as partnerships until : (1) December 17, 1997 or, (2) a significant new line of business was added to the MLP, whichever was earlier [Willis et. al., 1989, p. 35-3].

#### *MLP's–Prior Research*

Moore, Christiansen and Roefeldt [1988] investigated the effects of MLP formation on the share price of parent corporations for the period 1982 to 1987. They hypothesized a positive share price reaction for the two-day period on and before the announcement of MLP formation. A positive reaction could be attributed to: 1) the favorable tax status of MLPs, 2) the potential for additional cash flows to investors, and 3) dividend signalling effects because the level of cash disbursements to equity holders typically change when corporate assets are switched into MLP assets.<sup>7</sup>

Moore et al.[1988, p.108] also hypothesized that the positive price reaction associated with the "good news" of the MLP formation would offset any negative price reactions associated with MLP "bad news " Bad news might include the additional administrative costs, financing of the MLP, and conflicts of interest between the general and limited partners. Their results suggest that, on average, firms shifting assets to an MLP experienced significant, positive price reactions of

as much as seven percent around the MLP announcement dates. Because positive price reactions could be attributed to any of three "good news" arguments (1) tax advantage, (2) additional cash flow and (3) information signalling, it was not possible to discern which "good news" item caused the favorable reaction.

Collins and Bey's [1986] analysis examined whether MLPs were likely to be a wide spread form of doing business or were applicable only to the energy industry where they currently occurred in the greatest numbers. The study compared the financial advantages and disadvantages of the two entities as well as the legal, regulatory and economic developments which were likely to have motivated the formation of MLPs. Collins and Bey [1986, p. 6] note:

"... the MLPs seems to possess the other important corporate advantages: limited liability, transferable ownership, and unlimited life;

... the MLP offers significant reductions in effective tax rates

The MLP requires more detailed record-keeping and reduces the owner's control over management in matters not addressed by the partnership agreement."

A model presented to explain the MLP decision [Collins and Bey 1986, p 7] predicted that when corporate tax rates are higher than personal rates, MLP unit holders receive greater after-tax cash flows than their common shareholder counterparts. On the other hand, when corporate tax rates are lower than personal rates, the MLP unit holder is likely to receive smaller cash flows than common shareholders. Overall, the model indicates that MLPs are preferred by firms with high corporate tax rates and low reinvestment rates (i.e., firms likely to have substantial cash flows) [Collins and Bey, 1986, p.7]).<sup>8</sup>

Shevlin [1987] investigated a decision similar to the MLP formation decision by examining the use of limited partnerships (LPs) to fund research and development (R&D) ventures rather than funding these ventures through internally

generated cash flows. Shevlin cited tax considerations, off-balance sheet financing, and risk sharing between the R&D firm and other parties as factors favoring the use of limited partnerships. Costs that would discourage using LPs included the transaction costs of establishing the LPs and costs associated with disclosing competitive firm secrets.

Shevlin's results generally supported the tax hypothesis but were sensitive to the method used to measure the corporate marginal tax rate [Shevlin, 1987, p. 506]. The results for the off-balance sheet financing motive were mixed, but suggested that financing could be an incentive for using LPs.

### **Testable Hypotheses**

In this section we discuss the statistical hypotheses used in this study to distinguish among the tax, control, and financing motives for forming MLPs.

#### *The Tax Hypothesis*

There are two primary reasons why taxes might influence corporate conversions to MLPs [Davis, 1988, p. 53-54]. First, because of the conduit principle, partnership earnings are not subject to "double taxation" as are corporate earnings. Consequently, firms that have a long history of high dividend payout rates may be better off as an MLP because, after conversion, they may have greater after-tax cash flows available for distribution. Second, the Tax Reform Act of 1986 further increased the attractiveness of the MLP through changes designed to shift the tax burden from the individual to the corporate sector [Givoly and Hahn, 1989, p. 51]. The primary factor was the reduction in the marginal tax rates for individual investors below corporate marginal rates. Scholes and Wolfson [1991, p. 4-11] state: "[W]ith the 1986 Tax Act, the partnership tax rate not only fell below the corporate tax rate, but in addition shareholders faced a further tax on dividends and capital gains. As a result of the 1986 Tax Act, partnerships became superior to corporations as a way to minimize taxes."

In addition, other provisions of TRA 86 reduced the desirability of the corporate entity, including the repeal of the General Utilities doctrine that limited capital gains available to corporate shareholders, and the new corporate alternative minimum tax that potentially raised tax rates for many medium and small corporations. The evidence provided in the studies discussed above suggests that prior to 1986 tax motives were associated with the absence of double taxation for MLPs and that the tax motive increased substantially after 1986. This suggests the following hypothesis:

**Tax Hypothesis:** Corporations that form MLPs have higher tax rates than corporations that do not form MLPs.

Tax rate (**TAX**) is measured by the firm's current federal and state tax provision divided by net income before taxes and extraordinary items (also referred to as the firm's effective tax rate (ETR)).

#### *The Control Hypothesis*

Jensen [1986, p. 323] suggests that managers may have an incentive to allow the firm to grow beyond its optimal size because their power increases as the amount of resources under their control increases. In addition, Mann and Sicherman [1991, p.215] state that ". . . managers have incentives to expand firm size (whether or not the expansion increases shareholder wealth) since executive compensation and promotion are positively related to firm size." Managers of firms with limited investment opportunities are likely to find themselves pressured by investors to pay dividends rather than invest the firm's cash flow in low return or negative net present value projects.<sup>9</sup>

Because a firm's cash flows are the property of its investors, re-investment decisions should be guided by investor interests rather than by management's preferences [Kensinger, 1986, p. 73]. When management and owner interests are

not aligned, managers are likely to invest in low return projects rather than return free cash flows to investors (who may have opportunities to invest in higher return projects). Jensen [1986, p. 323] suggests that in this situation owners must determine "how to motivate managers to distribute the cash rather than investing it at below the cost of capital or wasting it on organizational inefficiencies." He uses the term "control hypothesis" to label prediction that restructuring will be used to return free cash flows to equity holders via leveraged buy-outs [1986, p. 324].

Kensinger [1986, p. 73] also argues that reorganizing the firm using a non-corporate form, such as an MLP, is consistent with the control hypothesis and "may serve as a means of accomplishing the task of putting the investors back in the drivers seat, while still providing them with the corporate advantage of limited liability." Kensinger [1986, p. 79] uses the phrase "Unfirming the firm" to describe "the phenomenon of returning resources to the control of the marketplace."<sup>10</sup> Currently, managers are not only expected to run existing operations effectively, but also to take primary responsibility for deciding how to reinvest the firm's cash flows. When a corporation becomes a managing partner in an MLP, its management is charged with the efficient operation of existing enterprises, but may be cut out of the reinvestment decision because the partnership agreements usually spell out how partnership profits will be shared and may provide explicit contractual terms for the disposition of free cash flows generated from operations.<sup>11</sup> Thus, the limited partners enjoy the advantage of corporate limited liability, but relinquish much less power to managers than do corporate shareholders. In addition, they may be the direct recipients of the free cash flows from operations and thus able to choose whether they wish to provide funding for the development of new projects or invest in other, higher return projects. This suggests that corporations with substantial free cash flows and limited investment possibilities

will be restructured by investors, so investors can retain more control over these funds. This leads to the following hypothesis:

Control Hypothesis: Corporations that form MLPs have higher levels of free cash flows than corporations that do not form MLPs

Free cash flows (**FREE**) is measured two ways ; the first implements Rao's (1991) definition of total cash flows as net income before extraordinary items plus the change in working capital (less cash and short-term investments) plus current year deferred taxes plus current year depreciation and amortization; the second is total free cash flows minus dividends. Dividends are defined as dividends declared and paid during the year. We use both measures because neither measure is a perfect proxy for free cash flows. These measures will tend to overstate the amount of free cash flows available to the firm. However, the overstatement should affect both MLP and non-MLP firms equally.

#### *The Financing Hypothesis*

Scholes and Wolfson [1991, p. 15-20] suggest that aspects of the 1986 Tax Act made the corporate organizational form less desirable than various non-corporate organizational forms. Firms that wanted to distribute some or all of their earnings to shareholders were motivated to distribute funds using methods other than paying dividends. For example, debt financing is preferred because debtholders pay tax only once on the interest payment and the corporation takes a deduction for the payment, reducing its own taxable income.

In contrast, Lee [1988, p.118] notes that limited partnership equity may serve as an alternative financing arrangement for corporations with high debt levels. He states that [1988, p. 118], "... limited partners' equity traditionally served as an alternative to conventional debt financing with resultant lower PTP [Publicly Traded Partnerships] debt-equity ratios and higher rates of PTP distributions

(corresponding to debt amortization in conventional large C corporations) than those of large C corporations." This suggests that MLPs are one means of converting from debt to equity financing so that cash distributions will go to the equity holders of the firm as distributions rather than to outside bondholders as interest. As a result, corporations with high debt levels may convert to MLPs to replace debt with equity financing and pay out larger distributions to shareholders. This reasoning leads to the following hypothesis:

Financing Hypothesis: Corporations that form MLPs have higher debt/equity ratios than corporations that do not form MLPs

Our debt measure (**DEBT**) is long term debt due within one year plus long term debt plus notes payable. Equity is measured by **DEBT** plus stockholders equity.

*Disincentives for MLP formations.*

Three hypotheses have been introduced to explain the creation of MLPs in the 1980s. However, there are factors associated with converting to and/or creating an MLP that could reduce the number of firms using this restructuring approach. This section discusses two sets of these factors.

First, the administrative costs of organizing and operating an MLP can be substantial, and could conceivably offset any gains resulting from reorganization. Examples are: a) the corporate and individual taxes payable on gains arising from a conversion, especially after the repeal of the General Utilities Doctrine, [Davis,1986, p.55], b) the costs of establishing the partnership including organizational and syndication costs (e.g., attorneys, underwriters, and accountants, fees), and c) the costs of administering the MLP, including the detailed tax records that must be kept by the firm for each limited partner.

Second the potential exists for conflicts of interest between general and limited partners. Conflicts are also likely to exist between lines of business when the corporation continues to exist as it does in the roll-out. Moore et. al. [1989, p. 116] state that: "the potential conflict is severe when the parent continues in the same line of business as the rolled out MLP or has subsidiaries in that line of business." On the other hand, these line of business conflicts may be reduced to the extent that MLP interest holders retain interests in the corporate general partner.

## **Methodology**

### *Sample Selection and Data*

The initial listing of 119 MLP's was obtained from the October 1988 issue of the Stanger Register (see footnote 5). From this group, firms meeting the following criteria were included in the sample:

1. The MLP was created through conversion or roll-out,
2. For conversions, there must be at least two years of financial statement data for the corporate entity prior to its conversion date,
3. For roll-outs, there must be at least two years of pre-roll-out financial statement data relating to the corporate assets transferred to the MLP, and
4. Complete data for the independent variables must be available for all firms meeting criteria 1-3.

The first filter reduced the initial sample of 119 firms to 56 firms that were formed either through the roll-out or conversion method. Of these 56 firms, four were deleted from the sample because available data indicated they were "not going concerns", S-Corporations, or they were utilities prior to MLP formation. This left 30 MLP conversions and 22 MLP roll-outs eligible for inclusion in the sample. Filters 2 and 3 removed an additional thirteen firms leaving 39 firms of which 27



were conversions and twelve roll-outs. One additional treatment firm was removed because the estimated **FREE** variable was 20 standard deviations from the mean. The firm was treated as an outlier for the treatment group and the results presented do not include the firm.<sup>12</sup> The final sample included 38 treatment firms (26 conversions and 12 roll-out). Table 1 summarizes the selection of treatment firms. Table 2 shows the MLP formation year for both roll-outs and conversions. Note that 26 of the 38 MLPs were formed after 1985 and 9 of the 38 are in the oil and gas industry. Five of the nine were formed by roll-outs; and the remainder were conversions. Appendix A is a detailed list of all of the sample firms included in the study.

The data utilized for this study were obtained from the Form 10-K or security offering document of the MLP at the time it initially went public or the Form 10-K of the corporation prior to the year of its conversion to a MLP.<sup>13</sup> The financial information for the period prior to the conversion or roll-out is used to determine an association between the three hypotheses and MLP formation.<sup>14</sup>

### *Control Group*

The following methodology was employed to select control firms. First, the two-digit SIC codes of the MLPs listed in Appendix A were obtained. This listing was then sorted by MLP formation year. Then, control firms which had the same two-digit SIC codes as the MLPs in each formation year were selected from COMPUSTAT. Finally, only those firms that had total assets between the minimum/maximum total assets for the MLP treatment firms in each formation year were included in each years' control group<sup>15</sup>

These procedures resulted in 289 matching firms, of which 55 are associated with the pre-1986 MLP firms and 234 with the 1986 and 1987 MLP firms. The pre-1986 treatment firms are combined into one group due to the small number of pre-1986 MLPs. The 1986 and 1987 control firms are the same and

none of the control firms formed MLPs during the period 1981 to 1987. Descriptive statistics for treatment and control firms for each of the test periods are presented in Table 3. For each group (period), the mean, standard deviation, and minimum/maximum amounts are shown for **DEBT**, **TAX**, and **FREE**.

### Controlling for Size

Scholes and Wolfson (1990) suggest that small closely held corporations are likely to form MLPs. This suggests that control firms should be matched on size to control for the possibility that size of the firm will confound the hypotheses tests. However, initial attempts to match on size within plus or minus 10% (then 20% of net sales or total assets did not provide matching firms for the smaller treatment firms. As a result, control firms were accepted if total assets were between the minimum and maximum total assets for the treatment group. Table 3 provides summary statistics for the size distributions of the treatment and control firms. Because the control group tends to be biased toward the larger firms, we tested for size differences between the treatment and control firms to determine whether a control variable for size should be included in the analysis. The tests indicate that for the pre-1986 treatment and control groups, average total assets for the treatment firms were significantly larger ( $p=.0498$ ). For the 1986 groups, average total assets for the control group are significantly larger than the treatment group ( $p=.0861$ ). Finally, for the 1987 groups, the average total assets are not significantly different. On the other hand, the 1987 treatment firms have a higher total assets variance than the control firms.

The data in Table 3 also indicate that, total assets for the three treatment firm groups vary substantially over the three tests periods. For example, average total assets for the pre-1986 treatment group is substantially larger than the 1986 or 1987 treatment group average. This difference is primarily attributable to the fact that the pre-1986 treatment sample includes Sun Energy Partners (\$5.6 billion in

total assets) and Mesa Limited Partnership (\$3.95 billion in total assets). If these firms are excluded from the sample, mean total assets for the pre-1986 MLP group would decrease to \$389 million. However, this is still 64.8% larger than average total assets for the pre-1986 control firms and 267.40% larger than the average total assets for 1987 MLP firms.

In addition, average total assets for the 1986 MLP firms, is smaller in relation to other MLP groups as well as its own 1986 control group. Thirteen of the nineteen 1986 treatment firms have total assets of \$132 million or less in the year prior to their MLP formation, with The Marina L.P. and Universal Medical Buildings L.P. having \$3.096 million and \$3.936 million in total assets, respectively. This is consistent with Scholes and Wolfson's argument that smaller firms were likely to form MLPs.

Based on the discussion above we will include a control for size when we test for the combined effect of **TAX**, **DEBT**, and **FREE** on the decision to form an MLP.

### Potential Sampling Problems

Zmijewski (1984, p. 77) suggests that model parameter estimates may be biased because of two potential problems that occur when treatment and control firm frequencies are not consistent with population frequencies. The first problem occurs when the researcher observes the dependent variable (in this case MLP formation) and selects a sample based on that knowledge. This procedure tends to favor selecting treatment firms in excess of their frequency in the population. Zmijewski suggests that this problem can be reduced by selecting treatment and control firms in frequencies representative of population frequencies. In light of this suggestion data for substantially more control firms than treatment firms were collected to reduce the effect of this problem. The second problem involves estimating a model using firms whose data were only complete for all periods. In

the financial distress literature this bias occurs because failed firms with partial information but with the highest probability of failure have a lower probability of being included in the sample. Thus, the population probabilities of treatment firm occurrence is understated. The treatment sample of conversion and roll-out MLPs was selected from a larger set of firms 13 of which were excluded because of insufficient data. The extent to which this bias may have affected the results has not been determined. Although, Zmijewski shows the biases exist in financial distress samples, apparently they were not serious enough to change inferences. Thus, the sample frequencies in this study may not substantially affect inferences about MLP formations.

### *Analysis*

Two levels of analysis were conducted in this study. The first is an attempt to determine whether MLP formation is associated with the tax, control or financing hypotheses during the three test periods. We selected the three test periods because they represent a natural transition in the tax hypothesis. Prior to 1986 tax incentives for forming MLPs were likely to be associated with removing the double taxation of corporate distributions. During 1986 the Tax Reform Act was passed and corporations became aware of the additional benefits associated with changes in marginal rates and additional disadvantages with the corporate form of doing business. Finally, 1987 represents the period in which all new MLPs (formed after December 17, 1987) would be treated as corporations for tax purposes and existing MLPs were notified of corporate taxation at the earlier of, December 17, 1997, or when new lines of business were added. Thus each period represents a change in tax policy that was likely to differentially influence the choice of organizational form.

The second level of analysis is an attempt to determine if the hypotheses apply more to one of the two types of MLP formation. Each level of analysis

involves both univariate and multivariate tests. The multivariate tests use probit model estimates and test for the combined effect of these three motives on MLP formation.

### The Model

Dietrich [1984] suggests two rationales for estimating a model: (1) testing the association between factors and an event of interest (e.g., MLP formation) and (2) developing a model to predict an event of interest (MLP formation). This study represents an initial attempt to detect an association between the tax, control, and financing motives and MLP formation. Consequently, although we present the percentage of correct predictions for the probit model, the main concern is with model coefficient estimates and their significance. Prediction of MLP formation for future research.

Probit models have been shown to be appropriate in cases where the dependent variable is dichotomous and qualitative in nature [Aldrich and Nelson, 1984, p. 48]. The specific form of the probit model is as follows:

$$MLP_i = B_0 + B_1TAX_i + B_2FREE_i + B_3DEBT_i + e_i$$

Where:

- $MLP_i$  = 1 if firm i converted to MLP, and 0 otherwise.
- $TAX_i$  = firm i's effective tax rate.
- $FREE_i$  = the total cash flows of the firm i
- $DEBT_i$  = total debt / (stockholders equity plus total debt) for firm i.
- $e_i$  = the residual.

The hypotheses suggest that the sign of the estimated coefficients for this model should all be positive. In addition to the problems regarding the frequencies of treatment and control firms, these variables are likely to be correlated. Therefore tests for multicollinearity problems were conducted on the matrix of independent variables. The tests suggest there are no

degrading effects from multicollinearity for the analyses of pre-1986, 1986, 1987, or between conversion and roll-out MLP model estimates.

## Results

### *Univariate Tests*

Univariate analyses are used to determine whether the means presented in Table 3 are significantly different for treatment and control firms during the three test periods. A Mann-Whitney test is used because it does not require that the sample populations be normally distributed. The tests for **DEBT**, **TAX** and **FREE** are one-tailed because the hypotheses predict these variables to be larger for treatment firms.

For three treatment firms, the registration statement or prospectus did not provide adequate information to estimate the **TAX** variable. In these cases, the parent corporation's ETR was used. In addition, the ETR of firms with a tax benefit and net loss before taxes and extraordinary items, was set to zero because the positive ETR was uninterpretable. Firms with a positive state and federal tax provision, but a net loss before taxes and extraordinary items, were coded as a "one" to represent 100% taxation. This treatment is consistent with Omer, Molloy and Ziebart, [1991, p. 63]. In addition, the registration statements for two firms did not include any tax information for either the entity or its parent in the year prior to its MLP formation. In these cases, the ETR was estimated using the applicable tax rates in place in the year prior to the MLP formation.

Table 4 presents the results of the univariate tests. Before 1986, the mean differences between treatment and control firms on **TAX**, and **FREE** are significant and in the predicted direction at  $p=0.0359$ , and  $0.0032$  respectively. For **DEBT** the mean difference is not significant for pre-1986 MLP formations. This suggests that the firm's cash flows and tax burden influenced MLP formation before 1986. On the other hand, only **TAX** is significant and in the predicted direction for the

mean difference between 1986 treatment and control groups ( $p=0.0032$ ). This suggests that only the firm's tax burden influenced MLP formation. Finally there are no significant differences for **TAX**, **FREE**, and **DEBT** between the 1987 treatment and control groups.

In summary, these results support the control and tax motives as factors that were likely to have influenced MLP formations prior to 1986. The results also support the tax motives for 1986 MLP formations; however, no support is found for the tax, control, and financing motives for 1987 MLP formations.

### *Probit Results*

Probit analysis allows us to determine which (if any) of these inter-related factors dominated the MLP decision. Table 5, Panel A, presents results for the pre-1986 test period. The chi-square for the model is 18.6847, and is significant at the .01 level; the regression has an overall r-square of 0.4152. The estimated coefficients for **FREE** and **TAX** are positive and significant ( $p<.02$ ). The coefficient for **SIZE** is significant and positive, which is consistent with the univariate results noted earlier indicating significant differences in total assets between treatment and control firms. Table 5, Panel B, provides the model estimate for the 1986 test period. The r-square is 0.1933 and the chi-square is 17.4119, which is significant at  $p=.01$ . The estimated coefficients for **TAX** and **DEBT** are positive and significant at  $p<.01$  and  $p<.05$  respectively. The results of the probit analysis on the MLPs formed in 1987 are presented in Table 5, Panel C. The model is not significant and consistent with the univariate results indicates no difference between treatment and control firms for 1987 MLP.

Overall, the results suggest that the control and tax hypotheses are associated with MLP formation prior to 1986. During 1986 only the tax hypothesis is associated with MLP formations. For 1987 we find no support for the hypotheses regarding MLP formation. The absence of univariate and multivariate results in

1987 suggests that the model is misspecified regarding the incentives that influenced MLP formation during 1987. This is the year Congress decided that ultimately all MLPs would be taxed as corporations. Consequently, future analyses could focus on correctly specifying a model of the incentives for forming MLPs in 1987 and on increasing the model's ability to predict MLP conversions in 1986 and prior years. The next section is a preliminary step toward improving our understanding of the incentives behind MLP formation.

#### *Analysis of MLP Firms--Roll-outs vs. Conversions*

The purpose of this section is to determine which form of MLP formation (conversion or roll-out) is more closely associated with the three hypotheses tested in the previous section. Descriptive statistics for the conversion and roll-out MLPs are presented in Table 6. Results of tests for mean differences in **SIZE**, **TAX**, **FREE**, and **DEBT** are presented in Table 7. These results suggest that firms forming MLPs through conversions were significantly larger and had smaller cash flows.

Table 8 presents the model estimated on the sample of treatment firms. The dependent variable, MLP, is now conversion and roll-out firms with conversions coded as "1" and roll-out firms coded as "0". The model chi-square is 10.4176, significant at  $p < .05$ , and has an r-square of 0.3364. The estimated coefficient for **FREE** is negative and significant at  $p < .01$ . The coefficients for **DEBT** and **TAX** are positive but not significant .

This suggests that smaller firms with greater cash flows chose the roll-out method of forming an MLP over the conversion method. It also suggests that the results of the previous analyses might be different if the model is estimated on MLP roll-outs and conversions separately. Control firms for this additional analysis were obtained using the maximum and minimum total assets for roll-out and conversion firms and the total number of control firms was reduced from the previous control



sample. The procedure resulted in 57 control firms for the MLP roll-out sample and 219 firms for the MLP conversion sample. Because of the limited sample size for roll-out and conversion firms, the analysis was conducted by combining all three tests periods into one covering 1981-1987.

### Univariate tests

Univariate results for roll-out and conversion MLPs versus their respective control group are presented in Table 9. The mean difference between roll-out firms and their control group for **FREE** is significant at  $p=.013$  and the mean difference on **DEBT** is significant at  $p=.0214$ . It appears that, based on the univariate results MLP roll-out firms have more cash flows and less debt than their control group. For the conversion MLPs versus their control group only the mean difference for **TAX** is significant at  $p<.01$ . These results suggest that MLP roll-outs are more closely associated with the amount of cash flows in the firm. This is consistent with arguments in the control hypothesis in which the corporation is likely to be the general partner with limited partners determining distribution and investment of cash flows. On the other hand, conversions appear to be associated with the tax benefits of MLP status, thus allowing the firm to escape corporate tax treatment and generate greater after-tax cash flows for distributional.

### Multivariate tests

The univariate results suggest that there are distinct differences in the incentives behind the type of MLP formation. The probit model is used again to determine what the combined effect of these motives is on formation type.

Table 10 presents the results of the probit regression on MLP roll-outs. The model is significant ( $p<.01$ ) with a chi-square of 18.6695 and an r-square of 0.3967. The coefficient for **FREE** is positive and significant ( $p<.02$ ). The coefficient for **TAX** is positive but not significant and the coefficient for **DEBT** is negative and

not significant. These results support the notion that the amount of cash flows dominates the decision to form an MLP through the roll-out method.

The results of the probit regression on MLP conversions are presented in Table 11. The model chi-square is 15.9465 and is significant at the  $p < .01$ ; the r-square is 0.12816. The coefficients for **DEBT** and **TAX** are positive and significant at  $p < .01$ . This suggests that firms with high tax burdens and debt ratios use the conversion method to form an MLP. The coefficient for **FREE** is not significant in this model, but has the predicted sign. These results are slightly different than the univariate results which suggest that only the tax benefits associated with conversion are important. However, one might also conclude that the tax and financing motives are not mutually exclusive because both may be important in the decision to convert to MLP status.

### **Summary and Conclusion**

As a result of Congressional actions, future MLPs will be taxed as corporations. The underlying assumption by Congress appears to be that tax savings were the primary motive for MLP formation. This study investigated two research questions concerning the motives behind MLP formation. The first, asked whether the tax, control, or financing motives might not all be associated with the formation of MLPs. The results suggest that, prior to 1986 MLP formations were likely to be associated with tax benefits and improved control over cash flows. During 1986 it appears that only the tax benefits were influenced the MLP formation. This is consistent with arguments that the Tax Reform Act of 1986 would make the corporate form less desirable relative to a flow through entity. For 1987, the year in which Congress established corporate taxation for MLPs, the results are inconclusive and suggest that the model does not fully capture the motives behind 1987 MLP formations.

The second question addressed is whether the type of change selected (conversion or roll-out) might not reflect the particular motive driving the MLP formation. The results suggest MLP roll-outs are associated with a firm's cash flows, which is consistent with arguments that controlling cash flows can be accomplished through a non-corporate form. We also find that MLP conversions are associated with both the firm's tax burden and level of debt prior to MLP formation, which is consistent with both the tax and financing motives. The model is not a good predictor of MLP formation, nor of the type of change in either set of analyses.

Although the evidence presented is preliminary, we suggest that tax policy efforts to mitigate tax advantages associated with MLP formation impose costs on MLPs that exist for reasons other than tax savings. The costs imposed on MLPs that currently exist and the economic consequences of restricting future MLP formations should be an integral part of the analyses of policy changes designed to remove tax advantages. The cost of reducing the distinction between corporations and MLPs should be considered carefully by Congressional leaders when they deliberate future tax policies that affect the organization of business enterprise.

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1. It was also posited that the increased cash flows available for distribution to partners would cause the market to revalue underperforming assets included in the MLP and reduce the incentives for takeovers of the parent firm [Collins and Bey, 1986, p.5]. This line of reasoning is also echoed in Limberg [1986, p. 84] who notes that: "A dropdown MLP is usually formed by a large (sponsor) company that may be a potential takeover target or has domestic assets that the stock market has discounted relative to their appraised value."

2. The TRA 86 reduced the top individual marginal income tax rate to six percentage points below the top corporate marginal income tax rate--28% for individuals and 34% for corporations. In contrast, under pre-TRA 86 law, the top corporate marginal rate was four percentage points below the top individual marginal rate--46% for corporations and 50% for individuals.

3. America Disincorporated, Forbes, June 16, 1986.

4. Apache Petroleum was the first MLP organized as a going concern. The first MLP was created by Teeco Properties in October, 1978. The MLP was formed pursuant to a plan of complete liquidation of Tishman Realty and Construction Co. It's principal objective was to sell/dispose of the Tishman properties and distribute the proceeds to the unit holders.

5. This information was obtained from two sources. The initial listing of MLPs was obtained from the 1988 issue of the Stanger Register. The industry affiliation information was obtained from the Annual Reports, Form 10-K's and/or initial Security Offering Documents of each MLP.

6. The six characteristics are: associates, an objective to carry on a business for profit, centralized management, continuity of life, free transferability of interests, and limited liability for owners.

7. Moore et. al. also hypothesize [p. 108] "[W]hen firms isolate subsets of assets, positive valuation effects may result from reduction in informational asymmetry between informed managers and uninformed investors regarding undervalued assets and from more efficient asset management.

8. Scholes and Wolfson [1991] also develop a model that would apply to MLPs which compares the after-tax returns to investing in partnerships with those from investing in corporations. They state [1991, p. 4-8]: "Whether the partnership form provides greater after-tax rates of return than does the corporate form depends upon four factors [1991, p. 4-8]: (1) the ordinary tax rate  $t_p$ , (2) the corporate tax rate  $t_c$ , (3) the taxes that are paid at the shareholder level  $gt_p$ , and (4) the length of the investment horizon." After further analysis, they conclude [p. 4-30]: "Unless there is substantial compensating non-tax benefits, our analysis suggests that partnerships dominate corporations if new equity must be issued to finance investment projects after the 1986 Tax Act. By implication, for tax reasons alone, the dollar volume of new issues of common stock to finance investments should fall and the number of

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partnership and S-Corporation formations to undertake new projects should increase."

9. Free cash flows are those funds generated internally in the firm that are in excess of those required to fund all positive net present value projects.

10. He cites Jensen's example of the use of LBOs or debt/equity swaps as an example of such organizational re-transformations.

11. Partnership net income and other tax attributes are credited directly to the partners account according to a fixed contract. There is wide latitude in the terms that can be incorporated in the partnership agreement regarding the general partner's discretion in distributing assets to unit holders. However, once agreement has been reached, the general partner's discretion over the use of partnership assets is bound by its terms. In some cases, the general partner may enjoy considerable discretion in the early years of the partnership. However, as time goes on, invariably that discretion declines [Kensinger, p. 74].

12. All analyses were also conducted with the outlier firm included. The results are essentially the same for all periods except 1987 when the mean difference between treatment and control firms for the **FREE** variable is significant but does not have the predicted sign. Results reported in the paper do not include the outlier.

13. Many of the corporations that converted substantially all or all of their assets to an MLP were "private companies" prior to their reorganization. In addition, many of the entities converted through rollouts were corporate subsidiaries or divisions of much larger corporations. These entities did not prepare public financial statements prior to the MLP conversion either because they were not required to or because their financial statements were consolidated with the larger corporate entity. Consequently, for these entities, it was only possible to obtain at least two years of pre-conversion financial statement data from the registration statements of the new MLP.

14. This recognizes the fact the the process of issuing registration statements and establishing an MLP can take six months to a year to accomplish. Therefore, it is reasonable to assume that the decision to establish the MLP would have been made based on the financial data of the entity during the year prior to the date of creation, and not the most current financial statements which existed as of the date of conversion/roll-out.

15. This additional screening technique was not practical for the 1980 and 1983 control groups, as there was only one MLP conversion in 1981 and there were two in 1984. Subsequently, for these groups, all firms that had net sales within +/- 20% of the net sales of the treatment firms (in the year before they converted to MLP) were included in the control sample. The same 234 firms were selected for the 1986 and 1987 control samples (i.e., these firms had no missing data for the two year period).

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## Appendix A

### Complete Listing of Master Limited Partnerships Included In Study

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TYPE	YEAR
<u>Panel A - Conversions</u>	
Allstar Inns, L.P.	1987
Furr's/Bishop's Cafeterias, L.P.	1987
Sahara Casino Partners, L.P.	1987
Sun Distributors L.P.	1987
Alliance Capital Management L.P.	1987
Oppenheimer Capital, L.P.	1987
Emerald Homes	1986
Interstate General Co., L.P.	1986
The Marina L.P.	1986
Motel 6 L.P.	1986
Perkins Family Restaurants, L.P.	1986
Standard Pacific L.P.	1986
Universal Medical Buildings L.P.	1986
Boston Celtics L.P.	1986
Intelligent Systems Master L.P.	1986
National Healthcorp L.P.	1986
Tenera L.P.	1986
USA Cafes L.P.	1986
Servicemaster L.P.	1986
Newhall Land & Farming Co.	1985
Royal Palm Beach Colony L.P.	1985
UDC-Universal Development L.P.	1985
Sun Energy Partners	1985
Mesa Limited Partnership	1985
Lear Petroleum Partners, L.P.	1984
OKC Limited Partnership	1981
<u>Panel B - Roll-outs</u>	
Petrolane Partners, L.P.	1987
Fine Homes International, L.P.	1987
Winchell's Donut House L.P.	1986
Commonwealth Mortgage of America, L.P.	1986
FFP Partners, L.P.	1986
Jones Intercable Investors L.P.	1986
Mauna Loa Macadamia Partners L.P.	1986
Freeport-McMoRan Resource Partners.	1986
Diamond Shamrock Offshore Partners	1985
Santa Fe Energy Partners	1985
IP Timberlands, Ltd.	1985
Freeport McMoRan Energy Partners, Ltd.	1984

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**Table 1**                      **Reconciliation of the Total Number of MLPs  
In Existence and Firm Sample**

MLPs in existence as of October 1988	119
Less:	
a. MLPs formed through roll-ups	36
b. MLPs formed through contributions	27
c. S-Corporations converting to MLP	2
d. MLP classified as a utility	1
e. MLP not organized as a "going concern	1
f. MLP excluded from study because free cash measure was 20 standard deviations from the mean of the group.	1
g. MLPs formed through roll-out or conversion with incomplete financial information	13
MLPs included in study	<u>38</u>

Source: The initial listing of MLPs was obtained from the October, 1988 issue of *The Stanger Register*. Detailed information regarding the classification of MLPs was obtained from their initial security offering document or subsequent Form 10-K.

**Table 2**                      **Year and Method of Formation of MLPs**

Formation Year	Conversions	Roll-outs
1980	1	0
1984	1	1
1985	5	3
1986	13	6
1987	6	2
Total	<u>26</u>	<u>12</u>

Source: Information regarding the proper classification of each MLP was obtained from the initial security offering document or a subsequent Form 10-K.

**Table 3 Descriptive Statistics for Treatment and Control Firms**

Variable	Mean	Standard Deviation	Minimum	Maximum
<b>Panel A: MLPs formed before 1986</b>				
Treatment Firms (n=11):				
SIZE <sup>a</sup>	1,187.00	1,836.01	35.49	5,600.00
DEBT	0.4826	0.3498	0.0000	1.1920
TAX	0.2607	0.3094	0.0000	1.0000
FREE	0.3502	0.3054	-0.1494	0.7758
Control Firms (n=55):				
SIZE <sup>a</sup>	236.04	189.80	52.41	1,092.40
DEBT	0.5353	0.3036	0.0050	1.7350
TAX	0.1469	0.2514	0.0000	0.8690
FREE	-0.0099	0.4954	-2.9829	0.6591
<b>Panel B: MLPs formed in 1986</b>				
Treatment firms (n=19):				
SIZE <sup>a</sup>	145.52	225.32	3.10	948.88
DEBT	0.4442	0.4154	0.0000	1.3444
TAX	0.3363	0.2745	0.0000	1.0000
FREE	0.1485	0.1831	-0.0707	0.7719
Control Firms (n=151):				
SIZE <sup>a</sup>	201.66	213.69	3.93	937.14
DEBT	0.4620	0.3581	0.0000	2.6203
TAX	0.1604	0.1828	0.0000	0.7845
FREE	0.0470	0.3165	-2.0080	0.7840
<b>Panel C: MLPs formed in 1987</b>				
Treatment firms (n=8):				
SIZE <sup>a</sup>	314.01	276.70	22.31	817.75
DEBT	0.5150	0.3905	0.0000	0.8865
TAX	0.3506	0.3536	0.0000	1.0000
FREE	0.0343	0.0734	-1.289	0.1282
Control Firms (n=83):				
SIZE <sup>a</sup>	225.76	166.21	38.87	814.89
DEBT	0.4595	0.2289	0.0000	1.1143
TAX	0.2425	0.2411	0.0000	0.9304
FREE	0.0638	0.2411	-0.8588	1.0676

**Table 3            Continued**

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**SIZE**     = Total assets.

**DEBT**    = (current + long-term debt)/(current + long-term debt + equity).

**TAX**      = (Current federal and state taxes)/(net income before extra-ordinary items).

**FREE**    = Cash-Dividends. Where Cash= Net income before extra-ordinary items + Change in working capital (excluding cash and short-term investments) + deferred tax expense + depreciation and amortization expense.

<sup>a</sup> Amounts are millions of dollars.

**Table 4            Univariate Analysis - MLP Firms versus Control Firms (Mann-Whitney U Test)**

Variable	U Score	U' Score	Z Statistic	p-value <sup>a</sup>
Pre-1986 MLPs (n=11) and Control Firms (n=55):				
SIZE	188.50	416.50	1.961	0.0498
DEBT	264.00	341.00	-0.662	0.2538
TAX	206.00	399.00	1.800	0.0359
FREE	144.00	461.00	2.727	0.0032
1986 MLPs (n=19) and Control Firms (n=151):				
SIZE	1,087.50	1,781.50	-1.716	0.0861
DEBT	1,351.00	1,518.00	-0.413	0.3398
TAX	897.00	1,972.00	2.725	0.0032
FREE	1,202.00	1,667.00	1.150	0.1255
1987 MLPs (n=8) and Control Firms (n=83):				
SIZE	285.00	379.00	0.659	0.5101
DEBT	291.50	372.50	0.568	0.2852
TAX	330.50	333.50	0.021	0.4914
FREE	243.00	413.00	-1.205	0.1142

SIZE =Total assets.

DEBT =(current + long-term debt)/(current + long-term debt + equity).

TAX =(Current federal and state taxes)/(net income before extra-ordinary items).

FREE =Cash-Dividends. Where Cash= Net income before extra-ordinary items + Change in working capital (excluding cash and short-term investments) + deferred tax expense + depreciation and amortization expense.

<sup>a</sup> The test for SIZE is two-tailed. DEBT, TAX, and FREE are tested using one-tailed tests.

**Table 5**                      **Probit Analysis of MLPs versus Control Firms**

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**Panel A: MLP Formations Before 1986:**

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Variable	Estimated Coefficient	Standard Error	T-Statistic <sup>a</sup>
CONSTANT	-4.3568	1.4947	-2.9148
SIZE	0.4274	0.2591	1.6497***
DEBT	0.2458	0.7714	0.3187
TAX	1.9679	0.8685	2.2659**
FREE	2.8675	1.1706	2.4497*

Likelihood Ratio Test: 18.6847\*

Gragg-Uhler R-squared: 0.4152

Percentage of right predictions: 0.9242

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**Panel B: MLP Formations in 1986:**

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Variable	Estimated Coefficient	Standard Error	T-Statistic <sup>a</sup>
CONSTANT	-1.4289	0.5461	-2.6167
SIZE	-0.1549	0.0988	-1.5675****
DEBT	0.6396	0.3705	1.7261***
TAX	2.3950	0.7094	3.3761*
FREE	0.5748	0.6281	0.9245

Likelihood Ratio Test: 17.4119\*

Gragg-Uhler R-squared: 0.1933

Percentage of right predictions: 0.8824

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**Panel C: MLPs Formed in 1987:**

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Variable	Estimated Coefficient	Standard Error	T-Statistic <sup>a</sup>
CONSTANT	-2.1990	1.3066	-1.6830
SIZE	0.1296	0.2338	0.5542
DEBT	0.3338	0.7470	0.4468
TAX	0.0955	0.8161	0.1170
FREE	-0.3712	0.8747	-0.4244

Likelihood Ratio Test: 0.7829

Gragg-Uhler R-squared: 0.0191

Percentage of right predictions: 0.9242

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**Table 5**                      **Continued**

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SIZE	=Natural log of total assets.
DEBT	=(current + long-term debt)/(current + long-term debt + equity)
TAX	=(Current federal and state taxes)/(net income before extra-ordinary items.
FREE	=Cash - Dividends. Where Cash=Net income before extra-ordinary items+ change in working capital (excluding cash and short-term investments) + deferred tax expense + depreciation and amortization expense.
*	Significant at less than 1%.
**	Significant at less than 2%.
***	Significant at less than 5%.
****	Significant at less than 6%.

<sup>a</sup> The test for SIZE is two tailed. DEBT, TAX and FREE are tested using one-tailed tests.

**Table 6**                      **Descriptive Statistics for MLP Roll-outs and Conversions**

Variable	Mean	Standard Deviation	Minimum	Maximum
MLP Roll-outs (n=12):				
SIZE <sup>a</sup>	430.08	334.17	13.10	911.71
DEBT	0.3721	0.4724	0.0000	1.3444
TAX	0.3046	0.2613	0.0000	0.7656
FREE	0.3461	0.2666	0.0270	0.7779
MLP Conversions (n=26):				
SIZE <sup>a</sup>	506.70	1,292.00	3.10	5,600.00
DEBT	0.5155	0.3497	0.0000	1.1192
TAX	0.3236	0.3154	0.0000	1.0000
FREE	0.1075	0.1824	-0.1494	0.7758
SIZE	=Total assets.			
DEBT	=(current + long-term debt)/(current + long-term debt + equity).			
TAX	=(Current federal and state taxes)/(net income before extra-ordinary items).			
FREE	=Cash-Dividends. Where Cash= Net income before extra-ordinary items + Change in working capital (excluding cash and short-term investments) + deferred tax expense + depreciation and amortization expense.			

<sup>a</sup> Amounts are millions of dollars.

**Table 7**                      **Univariate Analysis - MLP Roll-outs versus Conversions (Mann-Whitney U Test)**

Variable	U Score	U' Score	Z Statistic	p-value
MLP Roll-outs (n=12) and Conversions (n=26):				
SIZE	100.00	212.00	1.759	0.0786
DEBT	100.00	200.00	1.624	0.1044
TAX	152.50	159.50	0.111	0.9118
FREE	69.00	243.00	-2.732	0.0064
SIZE	=Total assets.			
DEBT	=(current + long-term debt)/(current + long-term debt + equity).			
TAX	=(Current federal and state taxes)/(net income before extra-ordinary items).			
FREE	=Cash-Dividends. Where Cash= Net income before extra-ordinary items + Change in working capital (excluding cash and short-term investments) + deferred tax expense + depreciation and amortization expense.			

**Table 8** **Probit Analysis of MLP Roll-outs versus Conversions**

Variable	Estimated Coefficient	Standard Error	T-Statistic
CONSTANT	0.9397	0.8669	1.0841
SIZE	-0.0789	0.1454	-0.5422
DEBT	0.8449	0.6576	1.2848
TAX	0.3175	0.9842	0.3226
FREE	-2.7257	1.1263	-2.4198*

Likelihood Ratio Test: 10.4176\*\*

Gragg-Uhler R-squared: 0.3364

Percentage of right predictions: 0.8158

SIZE	=Natural log of total assets.
DEBT	=(current + long-term debt)/(current + long-term debt + equity).
TAX	=(Current federal and state taxes)/(net income before extra-ordinary items).
FREE	=Cash-Dividends. Where Cash= Net income before extra-ordinary items + Change in working capital (excluding cash and short-term investments) + deferred tax expense + depreciation and amortization expense.

\* Significant at less than 1%.

\*\* Significant at less than 5%.

**Table 9** **Univariate Analysis - MLP Roll-outs, Conversions versus Control Firms (Mann-Whitney U Test)**

Variable	U Score	U' Score	Z Statistic	p-value <sup>a</sup>
MLP Roll-outs (n=12) and Control Firms (n=57):				
SIZE	266.00	418.00	1.203	0.2289
DEBT	214.00	470.00	-2.027	0.0214
TAX	274.00	410.00	1.097	0.1363
FREE	151.00	533.00	3.024	0.0013

MLP Conversions (n=26) and Control Firms (n=219):

SIZE	2,639.00	3,055.00	0.609	0.5427
DEBT	2,403.00	3,072.00	1.001	0.1585
TAX	2,022.00	3,672.00	2.516	0.0060
FREE	2,702.00	2,992.00	0.424	0.3357

SIZE	=Total assets.
DEBT	=(current + long-term debt)/(current + long-term debt + equity).
TAX	=(Current federal and state taxes)/(net income before extra-ordinary items).
FREE	=Cash-Dividends. Where Cash= Net income before extra-ordinary items + Change in working capital (excluding cash and short-term investments) + deferred tax expense + depreciation and amortization expense.

<sup>a</sup> The test for SIZE is two-tailed. DEBT, TAX, and FREE are tested using one-tailed tests.



**Table 10****Probit Analysis of MLP Roll-out versus Control Firms**

Variable	Estimated Coefficient	Standard Error	T-Statistic <sup>a</sup>
CONSTANT	-1.9065	1.1708	-1.6284
SIZE	0.0723	0.1775	0.4071
DEBT	-0.7521	0.6530	-1.1518
TAX	1.0948	0.9482	1.1546
FREE	3.7919	1.2854	2.9500*

Likelihood Ratio Test: 18.6695\*  
 Gragg-Uhler R-squared: 0.3967  
 Percentage of right predictions: 0.8551

\* Significant at less than 1%.

SIZE = Natural log of total assets.

DEBT = (current + long-term debt)/(current + long-term debt + equity)

TAX = (Current federal and state taxes)/(net income before extra-ordinary items).

FREE = Cash-Dividends. Where Cash = Net income before extra-ordinary items + Change in working capital (excluding cash and short-term investments) + deferred tax expense + depreciation and amortization expense.

<sup>a</sup> The test for SIZE is two-tailed. DEBT, TAX, and FREE are tested using one-tailed tests.

**Table 11****Probit Analysis of MLP Conversion versus Control Firms**

Variable	Estimated Coefficient	Standard Error	T-Statistic <sup>a</sup>
CONSTANT	-1.8520	0.4758	-3.8927
SIZE	-0.0714	0.4240	-0.7773
DEBT	0.9869	0.4817	2.3278*
TAX	1.7517	0.5348	3.6365*
FREE	0.7276	0.4758	1.3578**

Likelihood Ratio Test: 15.9465\*  
 Gragg-Uhler R-squared: 0.1282  
 Percentage of right predictions: 0.9051

\* Significant at less than 1%.

\*\* Significant at less than 10%

SIZE = Natural log of total assets.

DEBT = (current + long-term debt)/(current + long-term debt + equity).

TAX = (Current federal and state taxes)/(net income before extra-ordinary items)

FREE = Cash-Dividends. Where Cash = Net income before extra-ordinary items + Change in working capital (excluding cash and short-term investments) + deferred tax expense + depreciation and amortization expense.

<sup>a</sup> The test for SIZE is two-tailed. DEBT, TAX, and FREE are tested using one-tailed tests.

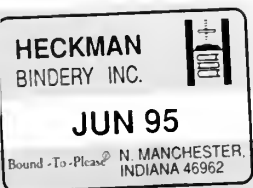












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